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## PERCEVAL'S RECONSTRUCTION OF THE PRE-ISLAMIC ARAB CALENDAR

F.A. SHAMSI\*

There is considerable evidence, nay, I should say, almost conclusive evidence, to show that the calendar in vogue among the Arabs at the advent of Islam — which will hereinafter be referred to as the "Arabian Calendar" — was luni-solar in character,<sup>1</sup> that that embolismic calendar remained in vogue among the Muslims till 8 AH/630 CE and among the pagans officially till 8 AH/631 CE,<sup>2</sup> and that the dates of some events in the life of Prophet Muḥammad (peace be on him) as recorded by early Muslim scholars belong to that luni-solar calendar and not to the vaguely lunar calendar in use among us, the Muslims (i.e. the *Hijrah* calendar).<sup>3</sup>

But what precisely was the nature of that calendar we do not know to any degree of certitude. The only competent early writer known to have treated of this subject, Abu'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī<sup>4</sup> (362/973-ca. 443/1051), is, in the first instance, too late a writer to be accepted as an original source of information, and, in the second instance, as pointed out by Caussin de Perceval, is too vague, hesitant and inconsistent in his reports concerning the Arabian calendar to be supposed to have narrated that which he had learned from tradition as to what the Arabs actually used to do rather than to have put forward mere conjectures as to what the Arabs might have been wont to do.<sup>5</sup> Scholars, therefore, have been reduced to divining the nature of the Arabian calendar by recourse to various stratagems, such as combining the suggested etymology of the names of the months and presumable correspondence between the months and seasons of the year with reports regarding the frequency of intercalations, or, taking the reported dates

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and days of two or more events and the reported interval or intervals between them and working out the possible number of days between pairs of such events, etc.

The first serious attempt to reconstruct the Arabian calendar was made by Caussin de Perceval (d. 1759/1835), one of the greatest Orientalists of the last century. His point of departure was the fact that *Hijjat al-Wadā'* took place in March 632 CE in the spring, whereas originally, when the names of months were adopted and an intercalary calendar was established — which he inferred to have happened simultaneously from the statement of al-Mas'ūdī and others that the names of months were adopted about 200 years before *Hijrah*, and the statements of al-Bīrūnī and al-Maqrīzī and others who say that embolism was adopted about 200 years before Islam. The system adopted must have been that the *Hajj* should come in or near the season of autumn.<sup>6</sup>

The only explanation that seemed possible — namely, that the Arabian system must have been faulty and must have been such that in about 200 years their year would be in advance of the solar year by about 6 months, was adopted by Perceval.<sup>7</sup> He found that if the system were to intercalate a month once every three years, as was suggested, according to Perceval by two of the earliest writers who have treated of this subject, Abu 'l-Fidā' and al-Mas'ūdī, then in 219 years — and it so happens that Muḥammad Charaksi states that the 10th year of *Hijrah* was the 220th year since the institution of *Nasī'* (intercalation) — the *Hajj* would retrogress from September to March.<sup>8</sup> Now, since 219 years make exactly 73 cycles of 3 years each, it may be taken for granted that year 10 AH began on 09.04.631 CE.<sup>9</sup>

The calendar worked out on this basis, Perceval found to be confirmed by other considerations. (i) According to Procopius, while addressing a group of Roman commanders at Daras in 541 CE., Belisarius, the Roman commander of the East, said that they were nearing the time of summer solstice, a time when the Arabs devoted two months to the practice of their religion and refrained from all bellicose acts.<sup>10</sup> In the year 129 Arabian of Perceval's calendar, the 10th of Dhu 'l-Hijjah fell on 22.06.541 C.E.<sup>11</sup>, just about the day of the summer solstice. (ii) The *Hajj* must have been originally scheduled for the autumn; as per Perceval's calendar, the *Hajj* fell in the autumn during the first 50 years. (iii) According to Ibn Ishāq, the Prophet (peace be on him) arrived in Madīnah as an immigrant in the middle of (actually, on 12) Rabī' al-Awwal at a time when the heat was inconvenient; according to Perceval, this happened in early July.<sup>12</sup> (iv) Allied troops besieged Madīnah in Shawwāl 5 AH at a time when it was very cold;

according to Perceval's calendar, this happened in January-February period.<sup>13</sup> (v) In the 220th year of the Arabs (corresponding to 631-32 CE), the *Hajj*, on Perceval's assumptions, should come in the beginning of spring; the Farewell *Hajj* was actually made in early March 632 CE.

In support of Perceval, it may be mentioned here that many Muslim scholars (implicitly) hold the view that in 10 AH the Dhu 'l-Hijjah of the Muslim calendar coincided with the Dhu 'l-Hijjah of the Arabian calendar.<sup>14</sup> This view is based on two reports. (1) The report of the early Muslims that in 9 AH the *hajj* was made in [Muslim] Dhu 'l-Qa'dah,<sup>15</sup> and that is why (a) the Prophet did not make a *hajj* that year and made the *hajj* the following year as the *hajj* that year fell in Dhu 'l-Hijjah,<sup>16</sup> and (b) the *Hijjat al-Wadā'* is called 'the correct pilgrimage'.<sup>17</sup> (2) On the occasion of *Hijjat al-Wadā'*, the Prophet said that the time had revolved back to the disposition of the day of creation,<sup>18</sup> which the commentators including Mujāhid, al-Zamakhsharī (d. 528 AH/1144 CE), Fakhr al-Dīn al-Rāzī (d. 606/1209-10), al-Khāzin (678/1280-741/1341), and Maḥmūd al-Ālūsī (d. 1270/1853-54), say means that the *hajj* was made at its proper season, i.e., in the month which ought to have been the month of Dhu 'l-Hijjah.<sup>19</sup>

This was a very fine attempt to rediscover the pre-Islamic Arabian calendar. But we have to reject it on the grounds that (1) the Arabian system could not have been that of intercalating a month once in every three years; (2) it was not the pagan month of Dhu 'l-Hijjah which corresponded to the Muslim month of Dhu 'l-Hijjah in 10 AH; and (3) the dates of numerous events, including such important events as the battles of Badr and Uhud, as per Perceval's calendar, cannot be the actual dates of those events.

(1) That the Arabian system of intercalation could not have been that of intercalating a month once every three years is evidenced by the following facts:

(1-a) Al-Mas'ūdī (d.ca. 346/957) and Abu 'l-Fidā' (d. 672/1273-732/1331) do state that the Arabs used to intercalate a month once every three years, and al-Mas'ūdī is certainly a much earlier writer than al-Bīrūnī. But al-Mas'ūdī and Abu 'l-Fidā' wrote 'popular' works for the general reader and hence such a rough statement sufficed for their purposes. There is no competent writer on record as having made such a statement in a work written for qualified students. On the contrary, we have writers earlier than al-Bīrūnī and even earlier than al-Mas'ūdī, who state that the Arabs used to intercalate once in two or three years. For example, Abū Ma'shar al-Balkhī<sup>20</sup> (d. 272/886), quite a competent scholar. Moreover, Mujāhid (21/642-104/722), a very early writer, says

that the Arabs used to make the *hajj* in every month of the year for two years and used to call that month Dhu 'l-Hijjah.<sup>21</sup> This statement implies that a month used to be intercalated once every two years and the *hajj* was made in the intercalary month. This again is a layman's statement for the laymen. But this shows that there is pretty little reason to suppose that the Arabs used to intercalate a month every fourth year or that al-Mas'ūdī and Abu 'l-Fidā' are the earliest writers to have broached this subject.

(1-b) The system of intercalating a month once every three years, as noted by Perceval, is so defective that in a mere 200 years the calendar year would be in advance of the solar year by six whole months. Now, the Qur'ān, which does object to the system of intercalation, charges the pagans only with the commission of the sin of making a sacred period/month non-sacred and a non-sacred period/month sacred. The Qur'ān does not say that the pagans' system was faulty. On the contrary, it says that it enhances the unbelief of the polytheists (in the prophethood of His Prophet).<sup>22</sup> Surely, so defective a system as that of intercalating a month every fourth year (i.e. the last year of every cycle of 3 years) which had made Ṣafar (meaning autumn) to come in early summer, Ramaḍān (implying scorching heat) to come in the winter, 'umrah (which, according to Perceval himself, must originally have been scheduled to be made in the spring) to be made in the autumn, and the *hajj* (originally scheduled to be made in the autumn) to fall in the spring, could hardly have sustained the pagans' belief in their religion.

(1-c) When we take into consideration all the relevant reports, especially those of Mujāhid, Ibn Kunāsah (123/741-207/823), Abū Ma'shar al-Balkhī, al-Bīrūnī and Abū 'Alī al-Marzūqī (d. 421/1030), the picture that emerges is as follows: The Arabs had taken a very accurate value of a lunation and a tropical year; they used to notionally add about 10.83 days to a lunar year of 12 months. When the sum of such a notionally added number of days used to amount to a lunation, it used to be actually added as the thirteenth month of a year; and, in intercalary years, the *hajj* used to be made in the intercalary month.<sup>23</sup>

(1-d) Even apart from the reports that the Arabs used to intercalate (only) when the progression used to amount to a month, there is evidence to show that the Arabian years had retained their original character intact up to the time of the Prophet (i.e. that they used to begin in the autumn), and hence that the Arabian system of intercalation could not have been what Perceval had taken it to be. For, in the *Sīrah* literature, whenever Ramaḍān or fasting (in Ramaḍān) is mentioned, the

accompanying circumstances (if also mentioned) make it clear that it was then the time of summer. For example, the first revelation is said to have come to the Prophet (peace be on him) in the month of Ramaḍān at a time when the Prophet was engaged in religious devotion (*tahannuth*) in a cave atop a hill near Makkah.<sup>24</sup> The battle of Badr was fought in Ramaḍān on a very hot day and the corpses of some of those who had been killed putrefied in a few hours before the time of sunset;<sup>25</sup> the conquest of Makkah took place in Ramaḍān and at that time it was very hot.<sup>26</sup> According to a Companion, on one occasion in the month of Ramaḍān they travelled with the Prophet (peace be on him) and it was then so hot that the Companions shielded their heads with their hands if they found nothing else and some of the Companions swooned when they stopped to take rest.<sup>27</sup>

(1-e) Perceval has mentioned certain circumstances which seem to support his view.

(1-e-i) The first of these is a report in Procopius which shows that in 541 CE the two months of Dhu 'l-Qa'dah and Dhu 'l-Hijjah must have begun near the time of the Summer Solstice (22 June). But this report is quite compatible with the view that the Arabian system was quite adequate and that in 540 CE, as originally, the Arabian year had begun in the autumn. Originally, as Perceval himself held, the *hajj* must have been scheduled for the August-September period and hence Dhu 'l-Qa'dah must have corresponded to July-August. Besides, there would be a normal progression of some days up to 28 days. Hence, if Dhu 'l-Qa'dah in 541 CE came soon after the Summer Solstice, then there should be nothing surprising about it. In other words, the report in Procopius is compatible both with Perceval's view of the Arabian system and the view that the Arabian system was to intercalate a month as and when the progression amounted to a month.

(1-e-ii) The second circumstance is the fact that in Perceval's calendar, the month of Dhu 'l-Hijjah falls in the autumn during the first 50 years. But on the assumption that the Arabs intercalated a month only when the progression used to amount to a month, the month of Dhu 'l-Hijjah would ever fall in the autumn. The latter view is in consonance with the retention of the names of the months, whereas on Perceval's view one has to explain why the names were retained when the meanings of the names became discordant with the seasonal placements of the months in spite of intercalations.

(1-e-iii) The third circumstance is that as per Perceval's calendar, the Prophet (peace be on him) reached Madīnah on June 28, 622 CE which agrees with the report that the heat at that time was inconvenient.

At the lava tract with no trees about, the sun would be scorching even half an hour after sunrise on the 24th of September in Madīnah. We have seen in our earlier article "The Date of Hijrah" (*Islamic Studies*, 23, 3 (1984): 189–224 and 289–323) that there is reason to believe that the Rabī' al-Awwal mentioned in connection with the *Hijrah* is the Rabī' al-Awwal of Year 1 of the *Hijrah* calendar and not that of the Arabian calendar. Thus no need arises for a calendar whose Rabī' al-Awwal in the year of *Hijrah* falls in the summer.

(1-e-iv) The fourth circumstance is that as per Perceval's calendar, the month of Shawwāl in the 5th year of *Hijrah* corresponds to January-February period, and it is reported that when the allied troops besieged Madīnah in Shawwāl in the 5th year of *Hijrah*, it was very cold. Now, the month of Shawwāl 5 AH (computationally) begins on March 3, 626 and ends on April 3, 626 CE. I believe that the Shawwāl of the reports about the siege of Madīnah is the Shawwāl of the *Hijrah* calendar. The trench was obviously dug some time before the allied troops arrived. In our view that would be in February. That a strong, cold wind blew in Madīnah on or about the 1st of April does not sound improbable to me, especially when we see that the intensity of the cold wind was regarded as a somewhat extraordinary phenomenon. However, on the whole, Perceval's date seems to be in better accord with the report of icy winds than that of the *Hijrah* calendar. But Ibn Ishāq carries a verse reportedly recited by Sa'd b. Mu'ādh, a short time after the siege had begun<sup>28</sup> which has been translated by Guillaume as follows:

Wait a little! Let Ḥamal see the fight.  
What matters death when the time is right?<sup>29</sup>

(Ḥamal is the name of a sign of the Zodiac, namely, Aries. The sun enters Aries on or about the 21st of March. The meaning of the verse is that soon the sun would enter Aries and that sign would march with the sun and thus see the fight, and that this would be a propitious time to die if one must). This couplet shows that on the day it was recited, the time of vernal equinox was approaching. If so, then the view that the Shawwāl in question is the month of Shawwāl 5 AH becomes more acceptable than the view that it corresponded to January-February period. (The siege was lifted in Shawwāl, in the last few days of that month, probably on the 29th of Shawwāl).

(1-e-v) The fifth circumstance mentioned by Perceval is the fact that 10 Dhu 'l-Ḥijjah in year 220 of his calendar falls on March 9, 1632 CE and there is no doubt that the Farewell *Hajj* took place in early



March 632 CE. If this *hajj* had been an Arabian *hajj* then some such calendar as the one proposed by Perceval would have had to be regarded as the Arabian calendar. But we shall just see that there is every reason to believe that the Farewell Pilgrimage took place at the time of an Arabian '*umrah*', i.e. in the Arabian month of Rajab.

(1-f) Finally, it is difficult to suppose with Perceval that 400 years after Hipparchus and 300 years after Ptolemy, the Arabs, who visited every year the Arabs of Roman Syria and Iranian Hīrah (both of whom had solar calendars) would adopt so inaccurate a value for the solar year that they would deem it sufficient to intercalate a month only every fourth year. Our disbelief increases when we consider the fact that, as is evidenced by the Qur'ān (10:5 and 17:12), the Arabs used to determine the number of years from the lunar mansions, in all probability in terms of the 'helical settings' of a given mansion, that of Aries.<sup>30</sup>

(2) The view that the pagan and Muslim months of Dhu 'l-Hijjah had coincided in 10 AH is based on evidence furnished by early reports to the effect that (i) the mixed *hajj* (made by the pagans as well as by the Muslims led by Abū Bakr) in 9 AH was made in the Muslim month of Dhu 'l-Qa'dah, and that is why the Prophet did not make the *hajj* at the first opportunity although its observance was obligatory on all Muslims, (ii) the *hajj* in 10 AH is called the correct *hajj*, because it was made in (Muslim) Dhu 'l-Hijjah (10 AH), the month appointed by God for this purpose, and that (iii) the Prophet stated on the occasion of the *hajj* in 10 AH (called *Hijjat al-Wadā'* or the Farewell Pilgrimage, because this was the last *hajj* made by the Prophet), that the time had revolved back to the disposition of the Day of Creation. Let us examine the evidence at some length.

(2-a) According to all early narrators, the Prophet (peace be on him) desired to go on a pilgrimage after his return from Tabūk in Ramaḍān 9 AH but preferred to keep away from the ensuing *hajj* because that was to be attended by the pagans who were wont to perform objectionable rites such as going round the Ka'bah in a state of (near) nudity; so, the Prophet (peace be on him) decided to send Abū Bakr instead as the leader of the Muslim pilgrims. The ensuing *hajj* was a mixed *hajj*, both the Muslims and the Pagans making it, each group according to its own rites. An announcement was made at this *hajj* that the pagans would not be allowed to make a *hajj* after that year, and, the next year, the Prophet (peace be on him) came to Makkah and made the *hajj*, a *hajj* attended by the Muslims only. We also have exegetes who say that the *Hajj* of Abū Bakr (i.e. the *hajj* at which Abū Bakr led the



Muslims) was made in Dhu 'l-Qa'dah, and that was why the Prophet (peace be on him) had preferred not to make that *hajj*.

Now, it is clear that the latter is not a datum but an inference from the former. The exegetes wondered why, if the *hajj* was obligatory for all Muslims, the Prophet (peace be on him) should fail to make a *hajj* at the first opportunity? Also, since they knew that the Arabs used to intercalate months so that what should have been regarded as Dhū 'l-Hijjah sometimes used to be regarded as Dhu 'l-Qa'dah, concluded that Abū Bakr's *hajj* must have been made in a month other than (the Muslim) Dhu 'l-Hijjah, and since the Prophet (peace be on him) made the *hajj* the very next year, concluded that *Hajj* Abū Bakr must have been made in Dhu 'l-Qa'dah.

However, Ibn Kathīr offers an argument which, at least *prima facie*, is conclusive against this view. Ibn Kathīr wants to know how, in that case, God could have held the day of the *hajj* to be "the day of great *hajj*" (*yawm al-hajj al-akbar*) since, not having been made in Dhu 'l-Hijjah, *Hajj* Abū Bakr could not be regarded as a *hajj* at all.<sup>31</sup> We feel that the assumption that *Hajj* Abū Bakr fell in (Muslim) Dhu 'l-Qa'dah is an unnecessary assumption although it could turn out to be true. For, a definitive chronology of events during the Medinese period of the Prophet's life yet remains to be worked out. As it is, an explanation is already there in the early reports, viz., that the Prophet (peace be on him) did not choose to make *Hajj* Abū Bakr because that was to be attended by the pagans. This, we feel, is the correct explanation. (We shall revert to it presently.)

(2-b) That the Farewell Pilgrimage was made in Dhu 'l-Hijjah 10 AH is well attested, and that Year 10 AH commenced on 09.04.631 CE is so well attested that Perceval and others who base themselves on these facts must be granted this point. But from these facts it does not at all follow that the Pagans' Dhu 'l-Hijjah coincided with the Dhu 'l-Hijjah of the Muslims, i.e. with Dhu 'l-Hijjah 10 AH.

(2-c) On the view that the pre-Islamic Arabian calendar was luni-solar in character, the Prophet's well known statement that the time had revolved back to the point of origin, clearly implies that the *hajj* that year was being made in the month appointed therefor. From this, however, the further conclusion that this was also the pagan Dhu 'l-Hijjah follows only from dubious assumptions. This question is intertwined with the question concerning the Arabian calendar, a question into which it is impossible for us to go in our present state of study. All I wish to do here is to offer an alternative explanation, which appears,

at least to me, to be a more satisfactory explanation than the traditional one.

We know pretty little about the nature of the pre-Islamic Arabian calendar beyond the fact that it was a luni-solar calendar, twelve lunations ordinarily and thirteen lunations occasionally constituting a year. But the little we do know includes the morally certain proposition that the Arabian year used to commence sometime in the autumn, in all probability very close to the day of the autumnal equinox, and hence that the *'umrah* used to be made in the spring.<sup>32</sup>

Now, for the Muslims, there is only one form of obligatory pilgrimage, the *hajj*; what is called *'umrah* is, so to say, a minor and voluntary pilgrimage, an off-the-season substitute for the *hajj*. For the pagans, there must have been two radically different kinds of pilgrimages. For they not only had two different nouns for them in their language, *al-hajj* and *al-'umrah*, they also had different verbs for going on a pilgrimage to make a *hajj* or an *'umrah*, *hajja* and *i'tamara*.<sup>33</sup> They also regarded the making of the *'umrah* in the season of *hajj* as among the greatest of all sins.<sup>34</sup> This means that the rites performed on those two occasions must have been radically different. But in Islam the rites are basically the same except that some extra rites are performed on the occasion of the *hajj*. In short, what used to be radically different for the pagans and used to be made at opposite cardinal points (i.e. with a difference of 6 months) has become for the Muslims almost the same thing.

This consideration alone suffices to lead to the surmise that what must have coincided in 10 AH were the months of Muslim Dhu 'l-Hijjah and Pagan Rajab (the Pagan month for *'umrah*) and that *Hajj* Abū Bakr was a *hajj* for the Muslims while it was an *'umrah* for the Pagans. When one considers the traditions relating to the *'Umrat al-Hudaybiyah*, *'Umrat al-Qadā'*, *Hajj* Abū Bakr and *Hijjat al-Wadā'*, and desires to determine which of these was what (whether an *'umrah* or a *hajj*, and whether a simple *hajj*/*'umrah* or an *'umrah*-leading-to-*hajj*, etc.) and recalls that the (Pagan) *'umrah* could not be made in the season of *hajj*, one is irresistibly led to the view that a confusion of *'umrah* with *hajj* was taking place.

This view becomes established when one recalls that the Prophet (peace be on him) was asked about the *'umrah* during the *Hijjat al-Wadā'* and replied that the *'umrah* had for ever entered into the *hajj*.<sup>35</sup> This tradition not only establishes that some *'umrah* or *hajj* turned into the other, it also helps to establish that it was an *'umrah* of the pagans which had been turned into a (Muslim) *hajj*. In short, what for the

pagans would have been an *'umrah* in the spring of 632 CE turned into a *hajj* made in what for the Muslims is Dhu 'l-Hijjah 10 AH which would have been the Rajab of a certain Pagan year.

If so, what is our explanation for the Prophet's statement that the time had revolved back to its point of departure? The explanation for the Prophet's statement is quite simple: in pursuance of the command contained in Verse 9:36, the Arabian calendar had not merely been abolished, it had been recast *ab initio* into a lunar calendar by imposing a cycle of 12 months as constituting a year. (Suppose that the first intercalation was made after 36 months. In that calendar, the 37th month would be the intercalary month and the 38th month would be Muḥarram (could be the pagans' Šafar al-Awwal) i.e. the 1st month of the 4th year of their era. But, when in what became Ramaḍān/Shawwāl 8 AH the calendar was recast *ab initio*, the 37th month became the 1st month of the 4th year and the 38th month became Šafar al-Ākhar or simply Šafar, i.e. the 2nd month of the 4th year).

We have reason to believe that, when the Arabian calendar was recast into the lunar mould, it was assumed that 100 or 101 months had in all been intercalated so that what was Jumādā al-Ūlā of the 8th (pagan) year of *Hijrah* became Ramaḍān/Shawwāl 8 AH. Thus the Muslim *Hajj* in 8 and 9 AH (probably made in Dhu 'l-Hijjah 8 and 9 AH) really coincided with the Pagan *'umrah* and so did the Muslim *Hajj* in 10 AH except that the Pagans were not allowed to make their *'umrah*, *Hajj* Abū Bakr having been their last *'umrah* at which it had been announced that *'umrah* (in the Pagan sense) would not be allowed after that year.

This not only explains the Prophet's statement in question but also verifies our assumption that the Pagans' Rajab and Muslims' Dhu 'l-Hijjah coincided in 8 and/or 9 and/or 10 AH. We also see that the reason for the Prophet's failure to make the *hajj* on the first opportunity is to be attributed less to the possible circumstance that the *hajj* in question was made in (Muslim) Dhu 'l-Qa'dah than to the circumstance that it was a *hajj* only for some and not for all those who attended it. Let us recall that *Hajj* Abū Bakr was a 'mixed *hajj*' in which the Muslims performed their own rites and the Pagans likewise performed their own rites (i.e., the Pagans made it an *'umrah*, and the Muslims made it something very close to the Pagan *Hajj*), and that an announcement was made during *Hajj* Abū Bakr that after that pilgrimage no person other than a Muslim would be allowed to make the *hajj* (i.e. there will no more be a Pagan *Hajj* or a Pagan *'Umrah*).

(3) Finally, it may be pointed out that the dates of so very important events as the *ba'thah* and the battles of Badr and Uḥud just

cannot be dates in Perceval's calendar, although the reported dates of these events must belong to the Arabian calendar.

(3-a) According to Perceval, the *ba'thah* took place (i.e., the first revelation came) on 23.12.610 AH.<sup>36</sup> Now, while Muslim scholars give different dates for it, they are all agreed that it happened on Monday. But 23.12.610 CE is Wednesday. Moreover, one would like to know what the Prophet (peace be on him) was supposed to be doing in a cave at the top of a hill on the 23rd of December, for, all reporters are agreed that the Prophet (peace be on him) was in the Cave of Hīrā' (which is at the top of the hill now called Jabal al-Nūr) at the time when the revelation came to him for the first time.<sup>37</sup> And if the Prophet (peace be on him) had been asleep in the Cave before Gabriel came to him with Verses 96:1-5 as 'Ubayd ibn 'Umayr ibn Qatādah al-Laythī reportedly states,<sup>38</sup> then the date of 23 December becomes almost impossible. If it was during daytime that the Prophet (peace be on him) was asleep then it must have been the period of summer when siesta is taken (and this will agree with the reports that the first revelation came in Ramaḍān and that Ramaḍān used to be a summer month). If it was the time of night, as stated by 'Ubayd ibn 'Umayr, then Dr Hashim Amir Ali's wonder that "a sagacious man of forty had chosen a cave on a hillside for meditation during a night of desert winter !!!" would be shared by us all.

(3-b) According to Perceval's calendar, the Battle of Badr (17 Ramaḍān in the second year of *Hijrah*) took place on 24.01.624 CE. Now, there is almost a consensus that this battle was fought on Friday (though Monday has also been mentioned); but 24.01.624 CE is Tuesday. Secondly, the day of 24.01.624 CE must have been quite cold. But, from all accounts the battle must have been fought on quite a hot day. 'Abd Allāh ibn Mas'ūd (apud Ibn Sa'd) reports that it was a hot day, and, it seems, the corpses of those who had been killed in the battle putrefied the same day.<sup>39</sup> Thirdly, the Makkan troops had rushed to Badr to protect their commercial caravan returning to Makkah from Syria. It is well known that the trade caravans of the Arabs used to go to Syria in the *ṣayf* (Spring-cum-Summer);<sup>40</sup> hence the caravan in question could not have been returning in the month of January. Finally, the battle took place in Ramaḍān. According to Perceval himself, at least originally, Ramaḍān must have been a midsummer month. If their system was not defective, and we have given reason to believe that it could not have been at least as faulty as Perceval had taken it to be, then Ramaḍān should still have been a summer month.

(3-c) The battle of Uḥud is unanimously reported as having taken place in the month of Shawwāl in the 3rd year of *Hijrah*. From all

accounts, it was very hot and the battle began very early in the morning and lasted for a very few hours; but, in the 3rd year of *Hijrah* as per Perceval's calendar, the month of Shawwāl begins on 17.01.625 CE, and, hence, whether the battle took place on the 7th or the 11th or the 14th, as per Perceval's calendar, this battle would be fought in January, in the season of winter. In Madīnah, if not also in Arabia in general, it is fairly cold in the second half of January. Moreover, there is a consensus that this battle was fought on Saturday. The most probable dates are those of 7th, 11th and 14th, but in Perceval's calendar, the 7th and 14th of Shawwāl 213 Arabian are Wednesdays and the 11th is Sunday.<sup>41</sup>

(3-d) Many other instances of discordance between reported days and dates in Perceval's calendar as well as between reported seasons and seasons indicated by Perceval's calendar, can be cited. To cite just one such example, there can be no doubt that the conquest of Makkah took place in Ramaḍān in the 8th year of *Hijrah* as per the Arabian and not the Muslim calendar. Now, this event took place, as stated earlier, at the height of summer. But Ramaḍān 218 Arabian, i.e., Ramaḍān in the 8th year of *Hijrah*, of Perceval's calendar, spans the period from 23.11.629 to 22.12.629 CE.

## CONCLUSION

Perceval adduced etymological considerations and reports by Muslim scholars to show that the Arabian calendar must have been luni-solar in character, and endeavoured to reconstruct that calendar in all its details in conformity with those reports. These reports included (1) al-Mas'ūdī's and Abū al-Fidā's statements that a month was intercalated every 4th year, and (2) the Prophet's statement in Dhu 'l-Hijjah 10 AH that the times had revolved back to the position of the Day of Creation, which the traditionists say means that the Dhu 'l-Hijjah of 10 AH was the month that would have been the Dhu 'l-Hijjah of a certain lunar year if the Pagan Arabs had not practiced intercalation. The present article adduces additional evidence to support the view that the Arabian calendar must have been embolismic. It acknowledges Perceval's effort to reconstruct the Arabian calendar as the first, and so far the only, serious attempt, and finds his reconstruction entirely in consonance with the early reports. Nevertheless, it is found that Perceval's calendar could not have been the actual Arabian calendar. (1) There are Qur'ānic verses that imply that the Pagan Arabs had assigned correct values to a lunation and a solar year, and, hence, they must have intercalated a month often after 3 but sometimes after only 2 years. (2) The reported seasonal phenomena and dates of such important events as *Ba'thah*, *Ghazwat Badr*, the Conquest

of Makkah, and *Ghazwat Hunayn* are incompatible with Perceval's calendar. (3) The Dhu 'l-Hijjah of 10 AH was indeed the month which should have been the Dhu 'l-Hijjah of a certain lunar year, and would have been so if intercalation had not been practised. But this did not come about because the Dhu 'l-Hijjah of the corresponding Arabian year just chanced to correspond to Dhu 'l-Hijjah 10 AH. The reason why the month of the Farewell Pilgrimage happened to be Dhu 'l-Hijjah, the reason was that the Arabian calendar had been recast in the vaguely lunar mould *ab initio* and the month now counted as Dhu 'l-Hijjah 10 AH happened to be the Dhu 'l-Hijjah of a certain (vaguely lunar) year of the Purgated Arabian calendar. In the calendar actually in vogue among the Pagan Arabs, the month in question must have been the Rajab of a certain year, not a Dhu 'l-Hijjah.

Thus, the task to reconstruct the actual Arabian calendar remains to be done. In endeavouring to do so, one must assume that (i) intercalations were made only when the calendar year would otherwise have been in advance of the solar year by a whole lunar month, and that (ii) Dhu 'l-Hijjah 10 AH coincided with the Rajab of the last year of the Arabian era.

<sup>1</sup>See F.A. Shamsi, "The 'Year' in the Qur'ān". *Islamic Studies*, 25, 3 (1986): 305–24; and F.A. Shamsi, "The Meaning of *Nasī'*: An Interpretation of Verse 9:37", *Islamic Studies*, 26, 2 (1987): 143–64. For a summary of the grounds, see n. 32.

<sup>2</sup>In our view the Muslim calendar was established in *circa* December 629 CE but the (Pagan) Arabs were allowed to retain their calendar till *ca.* March 631 CE although Makkah had in the meantime been conquered on 08.06.630 CE. However, it seems that despite its abolition by the Muslim government, the Arabian calendar remained in use at least among historians for very many years till 'Umar saw to it that it went out of use.

<sup>3</sup>For example the dates of the expeditions (*ghazawāt*) of Badr (Friday 17 Ramaḍān in the second year of *Hijrah*), Uhūd (Saturday 7 or 11 or 15 Shawwāl in the third year of *Hijrah*), conquest (on or about Friday 20 Ramaḍān in the eighth year of *Hijrah*) and Hunayn (middle of Shawwāl in the eight year of *Hijrah*), on which there is a consensus among early narrators that it cannot belong to the *Hijrah* calendar because of the seasonal details reported concerning these battles and because, in most of these cases, days and dates are incompatible with one another in the *Hijrah* calendar.

<sup>4</sup>Al-Bīrūnī, *Kitāb al-Āthār al-Bāqiyah*, reprint (Leipzig: 1923), 11–12, 60–63, 141, 325, 330, *et passim*.

<sup>5</sup>Caussin de Perceval, "Notes on the Arab Calendar Before Islam" (tr. L. Nobiron), *Islamic Culture*, XXI (1947): 135–53; see especially 145.



<sup>6</sup>Perceval, "Notes on the Arab Calender Before Islam", 135 and 146.

<sup>7</sup>*Ibid.*, 146.

<sup>8</sup>*Ibid.*, 146–50.

<sup>9</sup>*Ibid.*, 147.

<sup>10</sup>*Ibid.*, 152.

<sup>11</sup>*Ibid.*

<sup>12</sup>*Ibid.* (But in Perceval's calendar it is actually 28.06.622 CE which corresponds to 12 Rabi' al-Awwal, 211 Arabian. One wonders how Perceval could commit such a mistake. However, this does not affect his argument since late June is equally hot in Hijāz. Moreover, 28.06.622 CE is a Monday, and there is no doubt about Monday having been the day of the Prophet's arrival in Yathrib).

<sup>13</sup>*Ibid.*

<sup>14</sup>Mujāhid, *Tafsīr Mujāhid* (Kuwait: 1396/1976), 267; al-Zamakhsharī, *al-Kashshāf* (Beirut, n.d.), 2: 244 and 269; Fakhr al-Dīn al-Rāzī, *al-Tafsīr al-Kabīr*, (Cairo: 1357/1938), 15: 220; al-Khāzin, *Tafsīr al-Khāzin* (Cairo: Ḥasan Ḥilmī al-Kutbī, 1317 AH), 2: 236; Maḥmūd al-Ālūsī, *Rūḥ al-Ma'ānī* (Cairo: n.d.) 10: 93; Ibn al-Jawzī, *Zād al-Masīr* (Damascus and Beirut: 1384–5/1964–5), 3: 394 (quoting al-Māwardī).

<sup>15</sup>See, e.g. Mujāhid, *Tafsīr*, 266; al-Zamakhsharī, *al-Kashshāf*, 244 and 269; al-Rāzī, *al-Tafsīr al-Kabīr* 15: 93; al-Khāzin, *Tafsīr*, 2: 236; Maḥmūd al-Ālūsī, *Rūḥ al-Ma'ānī*, 10: 93; Ibn al-Jawzī, *Zād al-Masīr*, 3: 394–95 (quoting al-Māwardī); Ibn 'Abd al-Barr, *al-Durar fī Ikhtisār al-Maghāzī wa 'l-Sīyar* (Cairo: 1386/1966), 268 (quoting 'Ikrimah ibn Khālid al-Makhzūmī). But Muḥammad ibn al-Sā'ib al-Kalbī (quoted verbatim by al-Azraqī, *Akhbār Makkah*), Makkah: 1352, 1: 120) holds that *Hajj* Abū Bakr took place in Dhu 'l-Hijjah.

<sup>16</sup>For al-Bīrūnī, by implication; see *Kitāb al-Āthār*, 63: The Prophet (peace be on him) waited (to make the *hajj*) till the time of the Farewell Pilgrimage. Also Mujāhid, by implication; see his *Tafsīr*, 266–67.

<sup>17</sup>E.g. al-Bīrūnī, *Āthār*, 63. Al-Kalbī (apud al-Azraqī, *Akhbār Makkah*, 120) calls it *al-hijjah al-tāmmah* (the complete *hajj*).

<sup>18</sup>See, e.g., Mujāhid, *Tafsīr*, 267; Ibn Ishāq (Ibn Hishām's recension), *Sīrah*, reprint (Frankfurt: 1961), 968; al-Wāqidi, *Kitāb al-Maghāzī* (Oxford: 1966), 1112.

<sup>19</sup>Mujāhid, *Tafsīr*, 267; al-Zamakhsharī, *al-Kashshāf*, 269; al-Rāzī, *Tafsīr*, 15: 220; al-Khāzin, *Tafsīr*, 2: 236; al-Ālūsī, 10: 93; Ibn al-Jawzī, 2: 294–95.

<sup>20</sup>Apud Maḥmūd Bāshā, *Natā'ij al-Afhām fī Taqwīm al-'Arab qabl al-Islām*, tr. Ahmad Zakī (Cairo: 1305 AH), 53.

<sup>21</sup>Mujāhid, *Tafsīr*, 266.

<sup>22</sup>Verse, 9:37.

<sup>23</sup>See, e.g. al-Zabidī, *Tāj al-'Arūs* (Kuwait: 1385/1965), 1: 456–57; Mujāhid, *Tafsīr*, 266; Ibn Ḥabīb, *Kitāb al-Munammaq* (Hyderabad (Deccan): 1384/1964), 273–75; al-Bīrūnī, *Āthār*, 11, 12 and 62; al-Mazrūqī, *Kitāb al-*

*Azminah wa 'l-Amkinah* (Hyderabad Deccan: 1332 AH), 1: 86. See also F.A. Shamsi, "The Meaning of *Nasī'*", *Islamic Studies*, 26, 2 (1987): 143–64.

<sup>24</sup>Ibn Ishāq (Ibn Hishām), *Sīrah*, pp. 151–53.

<sup>25</sup>Ibn Sa'd, *al-Ṭabaqāt al-Kubrā* (Beirut: 1376/1957), 2: 23.

<sup>26</sup>Muslim, *Ṣaḥīḥ*, *Kitāb al-Ṣiyām*, *Bāb Ajr al-Muḥṭir fī 'l-Safar*, by implication; al-Wāqidi, *Maghāzī*, 801–2, and 864. The battle of Ḥunayn took place a fortnight later. According to all indications, this battle took place in a very hot season.

<sup>27</sup>Muslim, *Ṣaḥīḥ*, *Kitāb al-Ṣiyām*, *Bāb Ajr al-Muḥṭir* and *al-Takhyīr fī 'l-Ṣawm*.

<sup>28</sup>Ibn Ishāq (Ibn Hishām), *Sīrah*, p. 679 (reading Ḥamal instead of Jamal as actually printed in the *Sīrah* — following the Egyptian edition and Ibn Abī Shaybah). Ibn Abī Shaybah also carries the same report See *Muṣannaḥ Ibn Abī Shaybah* (Karachi: 1406/1986), 14: 408–409. The verse said to have been recited by Mu'adh, as published, is, however, slightly different in Ibn Abī Shaybah.

<sup>29</sup>Alfred Guillaume, *The Life of Muhammad*, reprint (Karachi: 1968), 457.

<sup>30</sup>See, e.g. Ibn Qutaybah, *Kitāb al-Anwā'* (Hyderabad Deccan: 1375/1956), 7 and 103–104; al-Bīrūnī, *Āthār*, 62 and 325.

<sup>31</sup>The Qur'ān, 9:51; Ibn Kathīr, *Tafsīr al-Qur'ān al-'Aẓīm* (Cairo: 1375/1956), 2: 357.

<sup>32</sup>Their year began with the month called Ṣafar al-Awwal (called by us al-Muḥarram) and was followed by Ṣafar al-Ākhar. There is every reason to believe that these were two autumn months, e.g. that "Ṣafar" means autumn and "*ṣafriyyah*" means autumnal rains. Moreover, the Arabs divided the year into four seasons: Rabi' (autumn), Shitā' (winter), Ṣayf (spring) and Qayṣ (summer), and counted them in the given order. In the Qur'ān itself, in *Sūrat al-Quraysh*, "*riḥlat al-shitā'*" precedes "*riḥlat al-ṣayf*". Furthermore, the Arabs are said to have divided the apparent lunar path into 28 mansions and to have begun the count of the mansions with al-Sharaṭān which has its setting at the time of autumnal equinox, and to have taken the period of a mansion to be the time between its setting and the setting of the next mansion. Moreover, there are indications that two consecutive settings of al-Sharaṭān marked the period of a year. Even the sheep and goats born in various seasons were counted in the order, 'Ṣafarī, Shatawī, Ḍafā'ī, Ṣayfī, Qayṣī and Kharafī'. We learn from the Qur'ān that the Arabs used to determine the number of years from (the revolutions of) the lunar mansions, and since al-Sharaṭān is the first of them and since the period of a mansion was marked by settings of mansions, it is reasonable to infer that their year began with the setting of al-Sharaṭān; in fact, the *Anwā'* writers do set out the year as the settings of the lunar mansions beginning with al-Sharaṭān. Finally, there is just no contrary report or indication in the entire literature against the view that the Arabian year began in the autumn close to the autumnal equinox. [Professor R.B. Serjeant, in his article, "Hud and Other Pre-Islamic Prophets of Hadramaut", *Le Muséon*, LXVII (1954): 121–79, quotes a passage from al-Marzūqī's *Kitāb al-Azminah wa 'l-*

*Amkinah* (Hyderabad: 1918), 2: 263, according to which the Arabs used to hold a fair at Shihr of Mahrah on the 15th of Sha'bān, and argues that this Sha'bān could not have been a summer month. Professor Serjeant proposes that the merchants travelling by sea from the Persian Gulf must have arrived at Shihr in November or thereabouts as the Baṣrah date-dhows did in 1947 when he was in al-Mukallā. He further points out that the contrary monsoon in the summer would not allow travel by sea to 'Aden and Ṣan'ā' from the Persian Gulf. Whence Professor Serjeant draws the conclusion that at the advent of Islam the months of the pre-Islamic Arabian calendar must already have lost touch with the seasons indicated by their names. The text quoted by Professor Serjeant is found on p. 163 of the second volume of the Hyderabad, 1332 AH edition. From the text all we get is the statement that the merchants, both of land and sea, assembled in Dabā on the last day of Rajab, used to travel to al-Shihr, the Shihr of Mahrah. It is not stated by al-Marzūqī that some of the merchants used to sail in boats. The presumption, therefore, is that all the merchants used to go from Dabā to al-Shihr by road if at that time it was impossible to travel by sea. However, a difficulty is indeed presented by the statement (on p. 164) that the Markets of 'Aden and Ṣan'ā' used to be held in Ramaḍān, for, we know that the Quraysh used to go to Yemen in *al-Shitā'* (autumn-cum-winter) and not in *al-Ṣayf* (spring-cum-summer). Thus, the statement about Arabian Markets presents a counter indication to the view urged by us. But, evidence in its favour is so strong that we are obliged to assume that there must be some way of reconciling the refractory fact of Markets in Yemen in the *Jāhilī* times].

<sup>33</sup>From the two Verses of the Qur'ān in which the words '*umrah* and *i'tamara*' occur it is clear that the relationship between the two was not that of a general and a particular concept; on the contrary, it is clear that there was a contrast between the two. See, Verses 2:158 and 196.

<sup>34</sup>See, e.g. al-Azraqī, *Akhbār Makkah*, 1: 125; al-Bukhārī, *Ṣaḥīḥ, Kitāb al-Ḥajj, Bāb al-Tamattu' wa'l-Iqrān wa'l-Ifrād bi'l-Ḥajj*; Ibn Ḥabīb, *Kitāb al-Munammaq*, 275.

<sup>35</sup>Muslim, *Ṣaḥīḥ, Kitāb al-Ḥajj, Bāb Jawāz al-'Umrah fī Ashhur al-Ḥajj*. In fact the Prophet (peace be on him) is reported to have been angered by the people (i.e. by the Muslims) on the occasion of *Hijjat al-Wadā'* and to have stated that had he known beforehand what he had come to know afterwards he would have made it an '*umrah* instead of a *hajj*'. (Muslim, *Ṣaḥīḥ, Kitāb al-Ḥajj* reports from 'Ā'ishah and Jābir ibn 'Abd Allāh).

<sup>36</sup>Perceval, "Notes on the Arab Calendar", 150, footnote.

<sup>37</sup>E.g. Ibn Ishāq (Ibn Hishām), *Sīrah*, 151–53; Ibn Sa'd, *Ṭabaqāt*, 1: 194.

<sup>38</sup>Ibn Ishāq (Ibn Hishām), *Sīrah*, 152.

<sup>39</sup>Ibn Sa'd, *Ṭabaqāt*, 2: 23.

<sup>40</sup>*Ibid.*, 1: 75; Ibn Qutaybah, *Ta'wīl Mushkil al-Qur'ān* (Cairo: 1973), 413; al-Ṭabarī, *Tafsīr al-Ṭabarī* (Egypt: 1329 AH), Part 30: 199.

<sup>41</sup>Al-Wāqidī, *Maghāzī*, 199 and 206; Ibn Sa'd, *Ṭabaqāt*, 2: 36; Ibn Sayyid al-Nās, '*Uyūn al-Āthār*' (Cairo: 1356 AH), 2: 2; Ibn Khathīr, *al-Bidāyah wa 'l-Nihāyah* (Egypt, 1351 AH), 2: 9; al-Samhūdī, *Wafā' al-Wafā' bi-Akhbār Dār al-*

*Muṣṭafā*, ed., ‘Abd al-Ḥamīd (Egypt: ca. 1374/1955), 282; al-Qaṣṭallānī, *Kitāb al-Mawāhib al-Ladunniyyah* (Cairo: al-Maṭba‘ah al-Sharqiyyah, 1326/1907), 1: 92. Even Sir Richard Burton, who visited al-Madīnah in 1853, says that the battle of Uhud was fought on Saturday 11 Shawwāl in the 3rd year of *Hijrah*; see his *personal Narrative of a Pilgrimage to Al-Madīnah and Mecca*, reprint (New York: 1964), 1: 423. Perceval, "Notes on the Arab Calendar", 150. (Year 213 Arabian of Perceval begins with 26.04.624; giving 30 and 29 days to the months alternately, we arrive at 17.01.625 CE as corresponding to the 1st day of the 10th month of that year).

